



COUNTY BOROUGH OF BOOTLE.

ANNUAL REPORT
OF THE
SCHOOL MEDICAL OFFICER.

1918.

BOOTLE :

BOOTLE TIMES, LIMITED, 30, ORIEL ROAD.

1919.

STAFF.

School Medical Officer and Medical Officer of Health—

W. ALLEN DALEY, M.D., B.Sc. (Lond.); B.A. (R.U.I.); D.P.H. (Cantab.).

Medical Inspector of Scholars—

J. MAXWELL TAYLOR, M.A., M.B., D.P.H. (Aberdeen) (on Active Service).

Acting Assistant School Medical Officer—

MISS K. COWE, M.B., Ch.B. (Liverpool).

School Nurses—

MISS W. NICHOLLS, MISS A. HUGHES.

Clerical Staff—

MISS WILSON, MISS O'CONNOR.

Part-time Officers—

Ophthalmic Surgeon—R. E. HARCOURT, M.D., F.R.C.S.

Throat Surgeon—C. YORKE, F.R.C.S.

School Dentist—C. McNABB, L.D.S.

In Charge of Remedial Exercises Clinic—MISS B. MCCOLL.

"For the future, which lies before us, we want not only more children but better children as the foundation of a new people."

—(Dr. Savill Willis).

28TH MARCH, 1919.

To the Chairman and Members of the
Education Authority.

LADIES AND GENTLEMEN,

I have the honour to present herewith the Eleventh Annual Report on the Inspection of School Children.

Dr. Taylor was in Mesopotamia throughout the year, and the more important parts of his work were performed by Dr. Kate Cowe and myself.

The scope of the work continues to grow, and during the year a Remedial Exercises Clinic, which is now doing a large amount of good work, was established.

Owing to school closures for a week in February, because of registration in connection with the food rationing scheme, and for four weeks in November because of the prevalence of influenza, the total number of inspections has not been so great as in recent years, but the leeway will be soon made up now that a return to pre-war conditions is, happily, imminent.

The new Education Act will bring to you many new responsibilities, such for example, as the duty of providing for the inspection of the scholars of secondary and continuation schools, the power of providing facilities for their treatment, power to provide holiday school camps especially for young persons attending continuation schools, to provide centres and equipment for Physical Training and to provide School Baths and Playing Fields, the duty of prohibiting any employment

of a child which is prejudicial to its health, and the supervision of the health of the children in Nursery Schools.

The work of the staff has been performed efficiently; Dr. Cowe has supplied many notes for inclusion in this report and Miss Wilson has worked the statistics.

Attention is directed to a special report by Dr. Cowe on whether Tonsils and Adenoids tend to disappear spontaneously during school life (Pages 22-23), and to the following suggestions:—

- (a) that applications for exemption should be accompanied by a certificate from the School Medical Officer (page 6).
- (b) that handkerchief drill should be instituted (page 15).
- (c) that toilet paper should be provided in the latrines, and "sanitary" monitors appointed (page 15).
- (d) the need for provision of more dental work (page 20).
- (e) that the provisions of the Elementary Education (Defective and Epileptic Children) Act, 1914, should be put into operation, and that classes for backward boys should be established (page 25).
- (f) the need for appointment of a third School Nurse (page 32).
- (g) the need for provision of open-air classes (pages 35-36).
- (h) new powers with regard to juvenile employment (see pages 36-37), and
- (i) the need for provision of a Minor Ailments treatment room in the new school (page 38).

I wish to take this opportunity to thank you for the attention you have always given to my suggestions.

I am, Ladies and Gentlemen,

Your obedient servant,

W. Allen Daley.

School Medical Officer.

COUNTY BOROUGH OF BOOTLE.

Number of Schools and Children:—

	Number	Accommodation.	Mean No. on Rolls.	Average Attendance.
Council Schools	7	7,728	7,258	6,385
Church of England Schools	3	2,407	2,433	2,090
Roman Catholic Schools	3	2,976	3,232	2,717
	13	13,111	12,923	11,192

The average attendance of children under five years of age in the Denominational Schools for the year ended 31st January, 1918, was 117. — No child under four years is now admitted to any school, and children under five years of age, with very few exceptions, are not admitted to Council Schools.

Cost.—I am indebted to the Borough Treasurer for the following:—

The rateable value of the Borough in 1918-19 was £493,526.

The gross cost of Medical Inspection for the twelve months ended March 31st, 1918, was £1,343 5s. 4d., compared with £1,214 2s. 5d. in the preceding year; the Government grant was £607 1s. 2d., hence the net cost was £736 4s. 2d.

The cost under this head per child on the school rolls was 2s. 4.48d. gross and 1s. 3.61d. net, and the cost as a decimal part of a penny rate was .846d. gross and .463d. net.

It is anticipated that a grant of £671 12s. 8d., being at the maximum rate of 50 per cent. will be received in respect of the above-mentioned expenditure of £1,343 5s. 4d.

Groups of Children Examined at Routine Inspections.—Owing to the schools being closed for five weeks because of food registration and influenza, no routine examinations were made in the Infants' Departments of Orrell Council, Salisbury Road Council, and St. Winefride's Schools; otherwise all leavers and entrants have been examined. Those left over from 1918 were inspected in January, 1919.

BOARD OF EDUCATION.—TABLE I.

NUMBER OF CHILDREN INSPECTED, 1st JANUARY, 1918,
TO 31st DECEMBER, 1918.

A.—“Code.”

B. Groups
other than “Code”

Age	Entrants						Leavers				Grand Total	Boys	Special Cases	Re-examinations
	3	4	5	6	Other Ages	Total	12	13	14	Total				
Boys ...	—	—	453	136	31	620	614	92	5	711	1331	Boys	465	1883
Girls ...	—	—	466	157	44	667	580	99	7	686	1353	Girls	534	1963
Totals ...	—	—	919	293	75	1287	1194	191	12	1397	2684	Totals	999	3846

In 1918 no children in an intermediate age group were examined; leavers formed 12.4 per cent., and the entrants inspected 11.4 per cent. of the average attendance; the total number inspected at routine examinations was 23.9 per cent. of the average attendance, compared with 26.8 per cent. in 1917 and 28.4 per cent. in 1916.

During the year ended 30th September, 1918, there were 563 exemptions from school, compared with 733, 661, 570, 283, and 228 in the preceding five years.

I would suggest that, in future, applications for exemption should be accompanied by a report from the medical department, as it sometimes happens that exemptions from school are desired for delicate children, to whose health employment would be distinctly detrimental.

It is worthy of note that in Sheffield, of the 2,757 boys who applied for exemption in 1917, 535, or nearly 20 per cent., were either rejected or referred for further opinion, advice or treatment. The percentage in 1916 was 15.

Children under Five Years.—In schools other than the Council, children are admitted before reaching the age of five years, and in these cases, a superficial examination or “march past” was carried out.

On attaining the age of five years, these children will be again examined as routine cases. In the meantime the defects are being treated.

Thirty-eight boys and thirty-seven girls were examined; 16 of the boys and 6 of the girls had defects which required treatment.

Special Examinations.—The number of children who were presented for special examination was 999, compared with 1,375 in 1917 and 1,209 in 1916. Fifty-one were presented by the teachers at school during the course of the routine inspections or re-inspections, and 948 were seen at the School Medical Offices.

Work of Past Years.—The following table shows the total number of examinations since the inauguration of the work:—

Year.	Routine Inspections.	Special Examinations.	Re-Examinations.	Totals.
1908	1,565	—	—	1,565
1909	2,550	408	—	2,958
1910	2,049	—	—	2,049
1911	2,920	515	1,119	4,554
1912	3,966	648	3,170	7,784
1913	3,488	762	3,490	7,740
1914	3,349	1,073	2,871	7,293
1915	2,955	1,200	2,754	6,909
1916	3,217	1,209	3,517	7,943
1917	2,960	1,375	4,725	9,060
1918	2,684	999	3,846	7,529
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Totals ...	31,703	8,189	25,492	65,384

The Inspection Clinic is now held at the School Medical Offices from 3-30 p.m. each Thursday, and from 10 a.m. until noon each Saturday. The number of new cases seen in 1918 was 948, compared with 1,251 in 1917, 1,075 in 1916, 1,109 in 1915, 900 in 1914, and 546 in 1913.

The following table shows the number of children referred for examination at the Inspection Clinic by:—

Teachers	...	...	...	416 or 43.8%
School Nurses	...	...	...	191 or 20.1%
Parents and others	...	...	...	197 or 20.7%
School Attendance Officers	...	...	...	144 or 15.1%

Work done at Treatment Clinics: —

	Attendances.	Cases.
Minor Ailments Clinic	5,591	421
Throat Clinic	389	107
Ophthalmic Clinic	1,914	992
Dental Clinic	583	510
Remedial Exercises Clinic	1,997	91
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	10,474	2,121

The figures for past years have been.—

1917	9,561	1,551
1916	8,073	1,490
1915	3,467	1,135

In addition 12 children suffering from ringworm of the scalp were referred for treatment at the Borough Hospital.

Re-Examinations.—3,846 re-examinations were made, compared with 4,725 in 1917, and 3,517 in 1916; 3,021 were performed at the schools and 825 at the School Medical Offices.

Other Examinations.—Eight bursars and 52 scholarship candidates were examined.

Attendance of Parents.—The number of parents who attended the inspections has further decreased from 53.4 per cent. in 1916 and 49.8 per cent in 1917 to 46.8 per cent.; this is probably owing to the greater number who worked during 1918 outside their own homes.

Objections to examinations numbered seven this year.

Summary of Defects.—A general summary may now be given of the results of the examinations:—

BOARD OF EDUCATION.—TABLE II.

	DEFECT OR DISEASE.	Code Groups.		Specials.	
		No. referred for treatment.	No. requiring to be kept under observation but not referred for treatment.	No. referred for treatment.	No. requiring to be kept under observation but not referred for treatment
	Number examined	2864		999	
	Mal-nutrition	47	115	4	—
Skin	Uncleanliness :—				
	Head	86	—	14	—
	Body	1	2	6	—
	Ringworm :—				
	Head	3	—	58	—
	Body	1	—	47	—
	Scabies	3	—	67	—
	Impetigo	90	—	181	—
	Other Skin Diseases	28	—	139	—
Eye	Defective Vision and Squint	321	20	62	—
	External Eye Disease	103	1	54	—
Ear	Defective Hearing	32	4	19	—
	Ear Disease	48	—	44	1
Nose and Throat	Enlarged Tonsils	48	257	19	8
	Adenoids	5	67	6	6
	Enlarged Tonsils and Adenoids	19	33	17	3
	Defective Speech	2	16	—	4
Heart and Circulation	Heart Disease :—				
	Organic	3	46	2	3
	Functional	5	—	3	—
	Anæmia	98	—	28	—
Lungs	Pulmonary Tuberculosis :—				
	Definite	6	—	2	—
	Suspected	7	2	5	1
	Chronic Bronchitis	40	—	6	—
	Other Disease	175	37	68	2
Nervous System	Epilepsy	1	1	4	—
	Chorea	1	—	3	—
	Other Disease	16	8	8	—
	Non-Pulmonary Tuberculosis :—				
	Glands	15	—	5	—
	Bones and Joints	6	1	4	—
	Other Forms	2	—	2	—
	Rickets	3	—	11	—
	Deformities	36	12	19	—
	Other Defects or Diseases	185	460	203	17

The number with any physical defect reaches the large percentage of 80.1. This figure is based on the method of classifying defects set out in previous reports, and is strictly comparable with them, viz.: 83.5 in 1917, 87.5 in 1916, 81.2 in 1915, and 66.5 in 1914. The more important

percentages of physical defects discovered this year are as under:—(last year's figures being shown in brackets), malnutrition, 6.2 per cent. (5.8); defective vision and squint, 12.7 (13.9); external eye disease, 3.8 (6.5); enlarged tonsils 13.2 (15.2); adenoids, 4.5 (5.9); organic heart disease, 1.8 (1.05); anaemia, 3.6 (7.5); and lung disease, 9.9 (15.2). The percentage where there was no adverse mark on the inspection schedule, either for physical defect or uncleanliness, or for insufficiency of clothing or footwear, was 16.9, compared with 11.2 in 1917 and 9.5 in 1916—a gratifying increase. The percentage placed upon the following-up register indicates the number of children for whom treatment in some form should be obtained, or who should be kept under observation. The names of 52.6 per cent. of the infants, 60.6 per cent of the senior boys, and 63.7 per cent of the senior girls were placed upon the register, the total percentage being 57.6, compared with 68.6 in 1917. There is a satisfactory improvement in the condition of the children, and with scarcely an exception, this refers to each individual disease or defect.

Amongst those referred for special examination were 85 children in whom no physical defect, or a trivial one only could be found. This number is accounted for by the large number of children who were sent by the School Attendance Officers.

Vaccination had not been performed in 163 entrants, or 12.6 per cent., and in 81 leavers, or 5.7 per cent. The alarming and increasing tendency during recent years to neglect this means of securing protection from small-pox is shown by these figures. Education on this subject is evidently necessary, the ignorance exhibited with regard to the object of vaccination being deplorable in numerous instances. The repeated introduction of small-pox into the town is to be expected, and it is most unfortunate that this, our most certain method of preventing its spread, should not be universally compulsory, with provision, however, for postponement on medical grounds.

Exclusion of Sick Children.—2,252 children were excluded from school during the year in accordance with the provisions of Article 53 (b) of the Code; 228 out of 272 children who had been excluded before the end of 1917 returned to school in 1918 and the total absence is included in the table. Of the other 44, 6 had died, 5 left school, 3 are mentally defective, 4 are epileptics, 3 are paralysed, and 13 are tuberculous. The absences of 131 children excluded during 1918, who were not fit to return

at the beginning of 1919 are not included. The total number of school days lost by the excluded children who returned to school during some part of 1918 was 39,074, an average of 16.6 for each child.

Disease.	No. Excluded.	Total No. of School Days Excluded.	Average No. of Days Excluded.
Scarlatina—Patients	251	8,048	32.1
„ Contacts	258	2,567	9.9
Diphtheria—Patients	62	1,681	27.1
„ Contacts	114	987	8.6
Enteric Fever—Patients	2	77	38.5
„ Contacts	7	74	10.5
Measles—Patients	296	3,670	12.4
„ Contacts	187	1,858	9.9
Whooping cough—Patients	111	1,670	15.0
„ Contacts	44	612	13.9
Chicken-pox—Patients	152	1,425	9.3
„ Contacts	40	408	10.2
Mumps—Patients	266	3,662	13.7
Ringworm—Head	50	3,450	69.0
„ Body	34	246	7.2
Phthisis	9	1,309	145.4
Anæmia	19	369	19.4
General debility (including suspected Tuberculosis)	28	904	32.3
Conjunctivitis	18	111	6.2
Bronchitis	32	325	10.1
Scabies	65	754	11.6
Eczema	26	249	10.8
Impetigo	134	719	5.3
Chorea	13	713	54.8
Blepharitis	10	82	8.2
Tonsillitis	10	49	4.9
Septic sores	19	92	4.8
Non-pulmonary tuberculosis	10	1,128	112.8
Other diseases	85	1,835	21.5
Totals	2,349	39,074	16.6

In this table, days when the schools were closed are not counted.

This year scarlet fever which caused the loss of 10,615 schooldays was the most important reason for absence from school. Ringworm of the scalp would have occasioned an even greater period of absence than 3,450 days, had not arrangements been made after the summer holidays for children with this disease to attend school wearing linen caps so as to prevent the spread of the disease. Children who are likely to be absent for more than four weeks are now placed upon a special "reserve register." The number on this register at the end of 1918 was 137. There is unfortunately a tendency for children whose names are on this register to be overlooked, and it is desirable that they should be medically examined at frequent intervals.

Height and Weight.—For the first time since 1914, the average height and weight of the children inspected at the routine examinations has been calculated. In all cases the children were weighed and measured without boots. The boys were weighed after their coats had been removed.

BOYS.

Age last birthday.	No. examined	Height in Centimetres.			Weight in Kilograms.			Height Weight Ratio.
		Anthro- pometric standard.	Average height of Bootle chil- dren.	Index No. taking standard as 100.	Anthro- pometric standard	Average weight of Bootle chil- dren.	Index No. taking standard as 100.	
5	453	103·3	97·5	94·4	17·4	17·6	101·1	179
6	136	109·2	106·4	97·5	19·1	18·8	98·4	177
12	614	139·7	135·6	97·1	33·1	31·5	95·2	233
13	92	142·2	138·7	97·5	35·0	33·3	95·1	240

GIRLS.

5	466	102·6	102·1	99·5	17·0	17·2	101·2	168
6	157	108·2	105·8	96·9	18·5	18·0	97·3	170
12	580	141·2	135·6	96·0	33·5	31·4	93·7	232
13	99	144·7	141·2	97·6	36·4	34·8	95·6	246

1 Centimetre = 0.39 inch.

Kilogram = 2.2 lbs.

The standards taken are pre-war, being those prepared by Mr. Arthur Greenwood after analysing the statistics relating to over 800,000 British children. The figures at the ages 5 and 12 years are emphasised in the

table by large type because they represent in each case a large number of units and the averages are hence a fairly reliable indication of the stature and weight of all Bootle children of those ages. Compared with 1914 the figures show a slight decline in the height and weight of the entrant boys, and a slight increase in the height and weight of the entrant girls. In the boys of five years, the average height has declined from 2.3 per cent. above the average to 5.6 per cent below, and the average weight from 1.7 above to 1.1 above. The height of the girls entering school was, before the war, 1.5 per cent. below the average; it is now 0.5 per cent. below. The average weight has increased from 0.5 per cent above to 1.2 per cent above. With regard to the leavers, the height and weight in both boys and girls are practically the same as before the war, though it must be noted that both now and then the leavers are about 5 per cent. below the average for the country, showing that there is some force acting on children in Bootle between the ages of 5 and 12 which causes their height and weight to fall behind those of children of similar ages in other towns. It is very gratifying to find that despite the food difficulties of the war, the height and weight of our children has been maintained practically at the pre-war levels.

Mal-Nutrition.--The nutrition of 7.3 per cent. of the children was recorded as excellent, 86.4 per cent. were regarded as normal and 6.2 per cent. as ill-nourished. The number of definitely ill-nourished children has not increased in spite of the food problems of the past year. The shortage of fatty foods manifested itself in slight under-nutrition of many children rather than in marked under-nutrition of a few. In very few cases was it apparent that there was a scarcity of food in general, although particular items of diet were often limited. Many children suffered from the lack of a substantial mid-day meal, owing to the absence of the mother at work. Bread and tea are still the favourite articles of diet until the evening meal, and some children appear to thrive on bread and tea for breakfast and tea, with vegetable soup added sometimes for the mid-day meal. Porridge is still unpopular in spite of the advice given on the subject. This is unfortunate, as the Scotch diet produces a child of splendid physique, easily recognisable when presented for examination. The main causes of mal-nutrition are past illnesses (particularly rickets), present disease (such as organic heart disease), and unsuitable diet provided for their children by parents who pamper them and give them only what they fancy. The small children of undersized

parents are not, as a rule, placed under the heading "sub-normal in nutrition," as, although the weight is low, their nutrition is normal.

Cleanliness and Condition of the Skin.—This year no action was taken under Section 122 of the Children Act as the Authority's cleansing station at the Junior Technical School was, throughout the year, in the possession of the Army Council. One child who was very dirty and who came from a very dirty family, was excluded from school and prosecuted for non-attendance. A fine of 5s. was imposed.

An analysis of the records of routine inspections shows that under the heading "Cleanliness or Otherwise of the Body," 192 or 7.1 per cent. of the children were verminous. On examining the heads, nits were seen on 4 infant boys or 0.6 per cent. of those examined, and on 84 infant girls, or 12.5 per cent.; of the leavers, 7 or 0.9 of the boys had nits in their hair, and 141 or 20.5 per cent of the girls. These are a distinct improvement on the figures for 1917, when 15.8 per cent of the entering girls and 27.8 of the leaving girls had nits in their hair. In 1914, before the routine inspection of heads by the School Nurses was commenced, 35.5 per cent. of infant girls and 60.9 per cent of "leaving" girls had nits. It has been noted that the cleanliness of the clothing also is greater than in former years.

The girls in every department were examined at intervals by the School Nurses. The standard continues to be high. Of 5,537 children examined during the latter half of the year, 562, or 10.1 per cent., were, at the first examination of the series found to have *numerous* nits in their hair. Last year the percentage was 17 and in 1916 it was 18. On the final examination of the series 346 or 6.2 per cent. of the total still remained dirty. During 1917, 485 remained dirty.

As it is now known that lice are carriers of serious diseases, and, as Trench Fever, brought over from France, may be conveyed to other members of the family by those insects, it is most important that our efforts to cleanse children be not only maintained but re-doubled.

Owing to the very numerous calls, in connection with the clinic work, on the time of the School Nurses, they have not been able to devote sufficient time to the following-up of the girls in their homes, and upon a considerable number of parents, the receipt of a notice, no matter how

strongly worded, has little or no effect. Combined with a greater number of visits to the homes, a considerable amount of use should be made of the Authority's cleansing centre. When children are cleansed at the centre, it is of course essential that their homes and the persons of other members of the family should also be dealt with, otherwise the child is re-infected within a few hours after its return. The solution of this latter problem is a matter for the Sanitary Authority.

* I regret to say there is still the same dearth of handkerchiefs which was noted last year. A more general adoption of handkerchief drill is very necessary.

Also, the recommendation made in last year's Report concerning the provision of toilet paper in the latrines has apparently not been acted upon, and in only one school recently inspected was there any paper at all.

In connection with this matter, I would suggest the appointment of "sanitary" monitors, whose special duty it would be to attend to ventilation and cleanliness and report periodically on their duties to the Class or Head Teacher.

Footwear.—95.1 per cent. of the children inspected at the routine examinations wore satisfactory footwear, including 3.1 per cent who were wearing clogs. The footwear of 3.9 per cent. was in need of repair and 0.9 per cent of the children were barefooted. During the winter 1917-18 the School Canteen Committee distributed 1,138 pairs of clogs, mainly through Clog Clubs, which have been formed at many of the schools. By means of the clubs, children were enabled to purchase clogs at an average cost of 3s. 9d. per pair, which is somewhat below cost price. The children readily subscribe for the clogs, every facility being given to receive odd pence brought at any time.

Clothing.—Although, on the whole, the clothing of the children was recorded as satisfactory, a few points are worthy of consideration. The girls, as a rule, are more warmly clad than the boys. It is quite the exception to find a boy wearing a woollen or flannel garment next to the skin, their usual apparel being a cotton shirt and either a jersey or a coat and a waistcoat above. On the other hand, many children are burdened with a superfluity of clothing, seven or eight

layers being found. The parents are advised and warned, but it is difficult to make them understand that a few warm garments are all that are needed.

Skin Diseases.—121 cases of skin diseases, excluding ringworm, were noted at the routine inspections: these include 90 of impetigo and 3 of scabies (the itch).

In addition to these, there were seen as special cases 181 cases* of impetigo, 67 of scabies, 44 of eczema, and 40 of septic sores. At a result of increased attention in the treatment of cases of scabies, the average period of absence from school for each case has been reduced from 17.6 days to 11.6. Even so, it caused the loss of 754 school days.

Ringworm.—Three cases of ringworm of the scalp and one of the body were seen at the routine inspections, but 105, viz.: 47 of the body and 58 of the scalp were presented for special examination, the increased prevalence of 1917 being thus maintained. The innovation advocated last year by which children suffering from ringworm of the scalp are allowed to attend school provided they wear a linen cap provided by the Education Authority, has been eminently successful. The linen caps were made by the scholars of the Secondary School for Girls. Each child with ringworm is provided with two. The scheme has been in operation since August, and already these children have been prevented from losing many valuable weeks of education. It is necessary to add that cases of ringworm treated by hospitals or private doctors should be notified at once to the School Medical Officer, so that caps may be provided, and the children admitted to school. The arrangement for the X-ray treatment of ringworm of the scalp at the Bootle Borough Hospital has been extended for a further period. Altogether 19 patients have been treated, 7 being referred during 1917 and 12 during 1918. The average period taken for cure has been five months, but the treatment of later cases has been completed in less time than that of the earlier ones. The average period required for cure by ointment treatment has been just over five months, but it must be remembered that the cases retained at the Minor Ailments Clinic for ointment treatment were not so extensive as those referred to the Hospital for X-ray treatment. The cases of ringworm treated at the Minor Ailments Clinic were 57, of which 21 were still uncured at the end of the year.

External Eye Disease.—The number of children found to be suffering from external eye disease at the routine examinations was 114, including 95 of blepharitis and 12 of conjunctivitis. There were 57 cases of external eye disease amongst the special cases. (See Ophthalmic Clinic Table for further particulars).

Vision.—The percentage of leaving boys with normal vision was 66.2; the percentage of girls 70.2; 22.9 per cent of the leaving boys and 20.9 per cent. of the leaving girls had defective vision of such a degree that further examination, and if necessary, the use of suitable spectacles were recommended. It is very necessary that next year, an intermediate group should be examined, as the vision of the infants cannot be tested, and as a result of this, children with defective vision are often not discovered until they have attained the age of 12 years, when they are examined as leavers.

One hundred and two of the routine cases were wearing spectacles at the time of examination.

Ophthalmic Clinic.—The total number of children seen at the Ophthalmic Clinic in the course of the year was 992. Apart from the 444 new cases, there were 409 who had been prescribed glasses in previous years and had come for their eyes to be re-tested, and 139 who were under treatment on 31st December, 1918. Of the 444 new cases 243 were referred from the routine inspections. The total number of attendances at the Ciinic was 1,914 compared with 2,033 in 1917.

The following table gives the nature of the defects:—

		Discharged after Appropriate Treatment.	Under Treatment Dec 31st, 1918.
<i>Eye Diseases.</i>			
Blepharitis	...	...	13 7
Chronic Conjunctivitis	...	...	3 —
Follicular ,,	...	...	4 —
Catarrhal ,,	...	...	1 —
Phlyctenular ,,	...	...	8 3
Nebulae	...	...	5 3
Marginal Keratitis	...	...	6 1
Corneal Ulceration	...	...	8 4
Other Eye Disease	...	...	12 7
Carried forward		60	25

	Discharged after Appropriate Treatment	Under Treatment Dec 31st, 1918
Brought forward	60	25
<i>Examined for Refractive Errors</i>		
Emmetropia (Normal Vision) ...	22	—
Simple Hypermetropia (Long Sight) ...	120	39
Simple Hypermetropic Astigmatism ...	53	17
Compound „ „ „ ...	62	12
Mixed Astigmatism	30	4
Myopia (Short Sight)	34	7
Advanced Myopia	1	—
Simple Myopic Astigmatism	7	1
Compound „ „ „ ...	11	7
Odd Eyes	4	—
Under Observation	—	11
Retinoscopy not taken and uncompleted cases —	..... 21	
	344	119
Totals	404	144

The table does not include particulars of the 409 children who attended to have their vision re-tested after having worn spectacles for six or more months: in 61 of these cases, a new prescription was necessary.

During the year, 35 children suffering from errors of refraction discontinued attendance at the Clinic before treatment was completed: in 4 their parents had left the district, 11 had reached the age of 14 years and would not attend again, one is attending elsewhere after one attendance at the Clinic; one child died before treatment was completed; the parents of a child who made one attendance at the Clinic refused to bring him again for spectacles to be prescribed; another 12 refused spectacles. In two of these, the defective vision was serious; one boy has left school and is now working at the docks, his father refuses to allow him to wear glasses; one girl has left school, but her mother is now willing to buy spectacles. In the other ten, the defect is not very serious: two have already left school, and the parents of the others are being urged to obtain spectacles.

Five children (new cases) were found to be wearing suitable spectacles.

Squint and Muscular Defects.—125 cases of squint were reported at the routine examinations, or 4.6 per cent. of those inspected. The percentage last year was 5.5. There were 23 amongst the special cases.

One hundred and one cases of internal and three of external squint were treated at the Ophthalmic Clinic, and are included in the table on page 18; for 71 of these, glasses have been obtained.

Seriously Defective Vision.—In 137 of the children who attended the Clinic the error of refraction was over 5 dioptres (a very serious amount). In 104 of these the appropriate glasses had been obtained before the end of the year. Glasses were obtained for the majority of the other 33 children and for most of the untreated squint cases, early in 1919. In many of these cases normal vision cannot be obtained even when spectacles are worn.

A series of leaflets on the care of defective eyes and of spectacles has been prepared by the Ophthalmic Surgeon, and saves much tedious repetition at the Clinic. In the cases of 22 children whose vision is so weak that they are unable to do "near" work without damage to their eyes, a special leaflet of instruction has been sent to the teacher as well as given to the parent, but all these children would be better in a special class.

Blind or Partially Blind Children.—Seven children are in the Wavertree School for the Blind, Liverpool, and three at Brunswick Road School for the Blind, Liverpool.

Spectacles.—A spectacle maker attends the Clinic, and the children are measured as soon as the prescription is given. In cases where it is ascertained that the parents cannot afford to buy a pair, the Authority pays, wholly or partially, for them. During the calendar year 50 pairs of new spectacles were provided; the cost was £10 5s. 10d., of which £1 14s. 6d. was recovered from the parents. In 1917, the net cost of spectacles was £10 6s. 2d., and in 1916, £21 10s. 5d.

Teeth.—At the routine inspection 47.9 per cent. of the boys and 44.3 per cent of the girls had four or more unsound teeth.

The School Dentist continues to perform very valuable work, which is increased by the fact that he has been able since August, 1918, to devote three half-days, instead of two, each week, to work for the Authority, but even this is not sufficient, and if we are to ensure that all children attending the elementary schools are to have the opportunity of leaving school with healthy mouths, a very much greater provision for dental services must be made. During the year, the Dentist endeavoured to examine the teeth of all children attaining the age of seven years during 1918, and to re-examine all those whose mouths had been examined in previous years. Unfortunately, he was unable to make any examination at all in St. James' Select School, and in only two—Salisbury Road and Linacre Council Schools, was he able to perform the re-examinations. It is exceedingly doubtful even with three half-days' work throughout the whole year, whether he will be able to complete, during 1919, even the very meagre programme of inspecting the new age sevens in each school and re-examining those whose mouths were healthy or were made healthy in previous years.

The Dentist inspected 871 children and re-inspected 237. Of the 871 first examinations, only 33 or 3 per cent., had a perfect set of teeth, but in another 179, treatment was not considered necessary. Over 35 per cent. of the children had more than eight decayed temporary teeth. The following tables give particulars of the first examinations:—

	Number examined.	Temporary Teeth			Permanent Teeth		
		Sound	Savable	Unsavable	Sound	Savable	Unsavable
Boys	436	3,622	2,118	1181	1804	360	19
Girls	435	3,427	1,967	1115	2102	420	11
Totals	871	7,049	4,085	2,296	3,906	780	30

Temporary Teeth.

	Boys		Girls		Total	
	No.	Percentage.	No.	Percentage	No.	Percentage
All sound	14	3·2	19	4·3	33	3·8
1 to 4 decayed	88	20·2	87	19·9	175	20·1
5 to 8 ,,	183	41·7	172	39·4	355	40·8
More than 8 decayed	151	34·6	157	36·0	308	35·4

Permanent Teeth.

	No.	Boys Percentage.		No.	Girls Percentage		No.	Total Percentage
No. Permanent Teeth	51	11·7		45	10·3		96	11·0
All sound	217	49·9		200	45·9		417	47·9
1 decayed	54	12·4		65	14·9		119	13·7
2 „	49	11·2		55	12·6		104	11·9
More than 2 decayed	65	14·9		70	16·1		135	15·5

Of the two hundred and thirty-seven children aged 8 and 9 years whose mouths were re-inspected, no less than 215, or 91 per cent., required treatment.

Altogether, including first examinations and re-examinations there were 874 children who required dental treatment. The parents of 10 promised to take their children to a private dentist, those of 25 refused to allow any treatment; 23 examined at the end of the year were given appointments in January, 1919, and 799 were given appointments during 1918. Seventeen scholars who lived in Liverpool were referred to Dr. Hope, the Medical Officer of the Liverpool Education Authority.

Of the 799 who accepted appointments, 289 or 36 per cent. did not keep them, and 54 discontinued treatment before it was completed. The mouths of 449 children were made perfectly healthy, as were those of the three cases left over from 1917. There were 7 cases under treatment at the end of the year.

The following table shows the nature of the treatment carried out. (The figures in brackets relate to the 3 children inspected in 1917 but treated in 1918).

Number of Children treated.	EXTRACTIONS.				Totals.	Fillings (Permanent Teeth).	Totals.
	Simple.	Local Anasthetics.	Gas.				
Boys 254 (1)	702 (2)	7	9		720	324 (3)	327
Girls 256 (2)	607 (10)	6	9		632	378 (6)	384
Totals ... 510 (3)	1309 (12)	13	18		1352	702 (9)	711

Nose.—Twenty-seven defects were reported at the routine examinations, 26 being cases of nasal discharge.

Adenoids, Mouth-Breathers, Enlarged Tonsils.—At the routine inspections 4.1 per cent. had symptoms of adenoids, and in 0.8 per cent. these were well marked; 17.6 per cent. were mouth-breathers. Most of the 4.1 per cent. suffering from adenoids are also included in the 17.6 per cent. who are mouth-breathers. 19.5 per cent. had enlarged tonsils: in 13.5 per cent. of the total examined the enlargement was more than trifling.

In addition to the above, 36 cases of enlarged tonsils, 16 of acute tonsillitis, 32 of adenoids, and 22 mouth-breathers were seen at the special examinations.

Dr. Cowe has made a special report on whether children grow out of adenoids and enlarged tonsils. The procedure adopted was to note, when examining leavers, whether or not any abnormality had been found when they had been examined as entrants seven to nine years before.

Two hundred and thirteen of the 1,397 leavers were found to have had nose and throat defects when examined soon after their entrance to school: 16 or 7.5 per cent., had been successfully operated upon; out of the remaining 197 the condition of 88, or 45 per cent. was satisfactory so far as the throat condition was concerned, and apparently they had undergone spontaneous cure. Their condition as entrants was:—

Tonsils very much enlarged	...	...	2
Tonsils very much enlarged and adenoids			1
Tonsils much enlarged	...	...	13
Tonsils much enlarged and adenoids	...		1
Tonsils enlarged	...	...	62
Tonsils enlarged and adenoids	...	...	5
Adenoids only	...	...	4

Seventeen children, or 8.6 per cent., had improved, a throat defect being still present. In 57 cases, or 29 per cent., the condition was unchanged, and in 35, or 18 per cent., there was an increase in the defect: 47 children in whom no throat defect was found when they entered school had varying degrees of tonsillar enlargement or adenoid growth when examined as leavers.

Out of 23 children reported (when entrants) to have tonsils *very much* enlarged and adenoids, 6 had been operated upon and cured, 3 had undergone spontaneous cure, 6 had improved and 8 were unchanged.

There were 61 children who, as entrants, had tonsils *much* enlarged either with or without adenoids, 5 had been successfully operated upon, 14 had undergone spontaneous cure, 11 had improved, in 21 the condition remained unchanged, and in 10 there was an increase in the condition.

Out of the 115 cases reported when entrants to have *slight* enlargement of the tonsils with or without adenoid growth, 3 had been successfully operated upon, 67 had undergone spontaneous cure, 23 were unchanged, and 22 showed an increase in the amount of the defect.

Of 14 cases reported when entrants to have an adenoid growth, 2 had been successfully operated upon, 4 had undergone spontaneous cure, 5 remained unchanged, and 3 showed an increase in the defect.

From these tables it will be seen that although 105 cases have improved spontaneously or the abnormality has disappeared entirely, 67 cases out of the 105 had only a slight defect. Out of the 92 cases which remained unchanged or showed an increase in the defect, the majority had marked tonsillar enlargement and an operation was necessary.

Dr. Cowe came to the following conclusions :—“ Where the enlargement is great, while there is a possibility of spontaneous cure, the probability is that the defect will remain or increase unless there is operative treatment: where the tonsils are only slightly enlarged and the mucous membrane does not appear very unhealthy, the probability is that the enlargement will disappear at the time of puberty, and that unless the enlargement causes symptoms, operation is unnecessary. Where there is an adenoid growth alone and no enlargement of the tonsils, the chances are almost equal for spontaneous cure or permanence of the defect, although the latter is somewhat more probable. The investigation shows, as one would expect, that the tendency towards spontaneous cure or improvement decreases as the amount of the defect increases.”

My only observation on this report is that whilst the figures with regard to tonsillar enlargement can be regarded as accurate, the accuracy of those relating to adenoid growths cannot be guaranteed, as a diagnosis of adenoids has been based on signs and symptoms only and not by feeling them with the finger or by seeing them in a post-nasal mirror.

Throat Clinic.—In June, Mr. Courtenay Yorke, F.R.C.S., who throughout the previous months of the year had been deputising for Dr. McDougall, was appointed Throat Surgeon to the Authority.

During the year there have been 10 operating days, and 107 children have had enlarged tonsils and adenoids removed. In 50 cases they were both present, in 14 adenoids only, and in 43 enlarged tonsils only.

The children recommended for operation as a result of either routine or special examinations, are examined by the Medical Inspector the day before Mr. Yorke is due to attend. There were 175 children so examined, of whom 110 were regarded as suitable for operation upon the following day. In the other cases, for various reasons operation was deferred. In only three of the 110 did the parents refuse operation. On two occasions it was necessary to detain children overnight owing to an excessive amount of bleeding: both children were fit to be taken home on the following day and had an uneventful recovery. All the children who have been operated upon are visited at home after the operation and they attend the Inspection Clinic in two or three weeks. They are then referred to the Remedial Exercises Clinic for breathing exercises, and since that has been done, the results are more satisfactory and more speedily attained than formerly, when the parents were relied upon to secure the daily performance of the necessary exercises.

Ear Diseases and Hearing.—At the routine inspections 9 boys and 6 girls were found to have a discharge from each ear; 15 boys and 19 girls suffered from unilateral ear discharge. Amongst the special cases were 12 of discharge from each ear and 25 of unilateral discharge. In most of the cases, adenoids were present. Throughout the year, the forced whisper test was used as a test for hearing. In 98.1 per cent. of the boys and 98.5 per cent. of the girls the hearing was normal, and a whisper could be heard with each ear at a distance of 20 feet. A special Clinic for ear cases was held each Saturday morning at 8.30: 39 children made 89 attendances.

Deaf and Dumb Children.—Five children are at Oxford Street Deaf and Dumb School, Liverpool, and two are at St. John's Deaf and Dumb School, Boston Spa. Two partially deaf and dumb children attend ordinary elementary schools, and another, aged 7, is still at home.

Mental Condition.—Of the 1,397 leavers examined at routine inspections, the mental condition of 48, or 3.4 per cent., was adversely reported upon. Amongst the 1,287 entrants, 8 or 0.6 per cent., were reported to be mentally dull.

No action has yet been taken to provide for the education of mentally defective children as required by the Elementary Education (Defective and Epileptic Children) Act, 1914.

There are, however, two classes for dull and backward girls, one at Orrell Council School and one at Gray Street Council School. There are 23 in one class and 25 in the other: the children are drawn not only from the schools in which the classes are held, but also from neighbouring schools. The children are selected by the Head Mistresses, and consist of girls who are retarded to the extent of 3 or 4 years. The instruction given is mostly confined to the "three R's," scripture, singing, drill, handwork and housewifery. In many of these children, the cause of the retardation is not primarily mental but a result of prolonged absence from school consequent upon illness.

Similar classes for boys and further provision for girls are very desirable.

It is advisable that a report from the School Medical Officer should be obtained before a child is admitted to either of these special classes in addition to a report from the Head Teacher of the school previously attended.

As accommodation provided by the Local Authority under the Mental Deficiency Act (Lancashire Asylums Board) is insufficient for the needs, and it is only in case of extreme urgency that the admission of a child can be secured, very few special examinations for mental defects have been made, as it was felt that little good would be done by filling up the very comprehensive schedule of enquiries if no tangible result would follow. Special attention was directed during the year to four cases of more serious mental defect. One was only backward, and was suitable for education in a special class for backward girls; the other three were quite unfit for education outside a special school, and they were excluded indefinitely from attendance at an Elementary School. There are now 13 children attending an ordinary school who could be

more suitably educated in a special day school for mentally defective children. There are 7 feeble-minded, 8 imbeciles, and 8 idiots of school age, none of whom attend school. They are, however, to a certain extent kept under observation by the Secretary (Miss Andrew) and voluntary visitors of the Liverpool and District Association for the Care of the Mentally Defective, and it is through their good offices that an occasional case, where the home conditions are particularly bad, has been admitted to an institution.

Heart and Circulation.—At the routine inspections 49 cases, or 1.8 per cent. of organic heart disease were noted. Amongst the special cases were five of organic heart disease.

Ninety-eight cases of anaemia, or 3.6 per cent., were noted at the routine examinations. This is a very considerable improvement on last year's percentage of 7.5. It may be that the standard has not been quite so high, or that there is a genuine improvement in the condition of the children.

Lungs.—Two hundred and fifty-two or 9.3 per cent. of the children inspected at routine examinations were found to be suffering from bronchial catarrh or bronchitis. Amongst the special cases there were 69 children with bronchitis.

Nervous Diseases.—Twenty-seven defects were discovered at routine inspections, including 19 children noted as "nervous" or "nervous tendency," 2 cases of epilepsy and 1 of St. Vitus' Dance. Amongst the special cases were 4 of epilepsy and 3 of chorea. There are 8 epileptics attending public elementary schools, and 9 who are excluded indefinitely owing to the frequency of the fits.

Pulmonary Tuberculosis.—At the routine inspections, 6 children were found to be suffering from active pulmonary tuberculosis, while 9 were provisionally classified as "doubtful."

Of the special cases, 2 were found to be suffering from what was regarded as active tuberculosis of the lungs; there were 6 cases of doubtful tuberculosis.

Osseous.—At the routine inspections, there were 7 cases of osseous tuberculosis, including 3 of disease of the knee. There were 4

special cases, including 2 of tuberculous spine, 1 of the hip and 1 of a bone of the arm.

Glandular.—There were 15 cases of tuberculous glands, 14 involving the glands of the neck. Amongst the special cases, there were 5 of tuberculous glands of the neck.

Other.—There were 2 cases of tuberculous peritonitis seen at routine and 2 at special examinations.

In the course of the year 216 cases of tuberculosis in children of school age came under observation at the Tuberculosis Dispensary. This is 1.2 per cent. of the children of school age in the town. One hundred and nine of the cases, or 0.61 per cent. of the school population, were of pulmonary disease, and 107, or 0.6 per cent., of non-pulmonary.

Seventeen of the pulmonary cases were treated in institutions during some part of the year. Eighty received dispensary treatment only, and 12 treatment from private practitioners. The non-fatal pulmonary cases comprise 61 of early disease, 27 intermediate or chronic, and 7 advanced.

Of the 107 non-pulmonary cases, 21 received institutional treatment during the year, 71 dispensary only, and 15 were treated by private practitioners.

Nine of the 21 non-pulmonary cases who received institutional treatment were maintained in the Leasowe Sanatorium at the cost of the Local Sanitary Authority: 4 were cases of tuberculous hip, 2 of tuberculous spine, 2 tuberculous knee, and 1 tuberculous ankle.

In addition to the above-mentioned definite and notified cases of tuberculosis, there are 53 pulmonary and 24 non-pulmonary cases of suspected tuberculosis which are under observation by the Tuberculosis Officer.

Seventy definite cases of pulmonary disease and 68 of non-pulmonary, together with 47 of the suspected pulmonary and 19 of the 24 suspected non-pulmonary cases, were in attendance at an ordinary school in December, 1918. Seven obtained exemption from school on compassionate grounds.

Nine of the children died of phthisis, 3 tuberculous cases died of pneumonia and 2 of influenza.

Deformities.—There were 82 children suffering from deformities due to rickets; of other deformities, 7 were congenital in origin, 8 the result of infantile paralysis, one was the result of old tuberculosis, and 11 were of lateral curvature of the spine.

Amongst the special cases were 44 children who were deformed. In 11 the deformity was due to rickets, 6 children had lateral curvature of the spine, 4 were cases of infantile paralysis, and 5 had round shoulders.

Remedial Exercises and Massage Clinic.—A Clinic for remedial exercises and massage, under the supervision of Miss Betty McColl, was established at the School Medical Offices during the year. The first was held on the 15th April. The clinic meets at 4 p.m. on three afternoons a week, this hour being fixed in order to allow children to attend after school. Miss McColl is assisted by the senior students of the Liverpool School of Massage, of which she is the Principal, and this makes it possible for a large amount of work to be done.

Mouth-breathers and those who have been operated upon for adenoids and enlarged tonsils, attended a special class conducted by Miss McColl during the later months of the year, and 20 children made 276 attendances. Apart from the mouth-breathers, 71 children received attention, and their attendances numbered 1,721. The average attendance at the clinic was 24. Particulars of the work done are given in the following table:—

Disease.	No of patients.	Discharged cured.	Still attending.	Attendances.	Left before treatment completed	Attendances.	Total Attendances.
Round Shoulders ...	16	1	9	305	6	83	388
Facial Paralysis ...	6	—	4	116	2	27	143
Infantile „ ...	16	—	13	395	3	16	411
Lateral Curvature ...	15	1	12	402	2	36	438
Dislocated Hip ..	1	—	—	—	1	25	25
Paralysis of Arm ...	1	—	1	3	—	—	3
Alar Chest ...	1	—	1	62	—	—	62
Dislocated Ankles ...	1	—	1	5	—	—	5
Old Rickets ...	10	—	8	117	2	34	151
Elevation of Shoulder ...	1	—	1	37	—	—	37
Torticollis ...	2	—	2	30	—	—	30
Club-Foot ...	1	—	1	28	—	—	28
Totals ...	71	2	53	1500	16	221	1721

It is to be noted that the length of treatment required for many of the cases is from 6 to 18 months, and that therefore, the number already discharged as "cured" is small, but the progress of those still under treatment has been most remarkable. It has now been arranged that an additional clinic shall be held each Saturday morning; girls only are to attend on Monday and Friday afternoons and boys only on Wednesday afternoon and Saturday morning. Further, an expenditure of £50 on electric apparatus has been sanctioned, and it is anticipated that this will add considerably to the usefulness of the department.

Other Defects or Diseases.—Under this heading are included 23 children who had scars of old abscesses or operations; there were 13 with goitre, 7 cases of rheumatism, 9 children who complained of persistent headache, 8 with gastritis, 4 with nephritis, 4 with enuresis and one with hernia.

At the special examinations, there were 223 "other diseases," including 24 with stomach trouble, 19 with abscesses, 1 diphtheria, 5 mumps, 2 measles, 3 chickenpox, 3 influenza, 1 whooping-cough, and 1 hernia.

Infectious Diseases:—*Scarlet Fever.*—The number of cases notified amongst children of school age was 230 compared with 120 in 1917. There were no less than 31 cases from Christ Church School, 24 from Linacre Council School, 21 from Gray Street Council School, 20 each from Salisbury Road Council School and St. James' School; Hawthorne Road Council School had 19 cases, Orrell Council School, 18, and Balliol Council School, 10 cases.

Diphtheria.—During the year, 69 cases of diphtheria occurred in children of school age. The schools with the greatest numbers were Linacre Council School, 13 cases; Gray Street Council School, 11; Bedford Road Council School, 9; and Orrell Council School, 6.

Measles.—The prevalence of measles during the year was much less than usual. There were 276 cases compared with 551 in 1917 and 700 in 1916.

Whooping Cough.--In 1918, only 97 cases in school children were reported, and these together with 50 contacts were excluded. In 1917, there were 226 cases and 109 contacts.

Mumps.--During the year, 244 cases of mumps were reported, compared with 486 in 1917 and 26 in 1916.

Chicken Pox.--There occurred amongst school children 150 cases of chicken-pox, and these, together with 40 contacts were excluded; compared with 264 cases and 40 contacts in 1917.

Influenza.--During June and July, a small number of cases of influenza occurred, and this was followed by a very serious epidemic in October and November. At first the disease did not appear to have any special predilection for children, but as it advanced, very large numbers of school children were affected. Early in the epidemic, it was noted that there was no particular classroom or class distribution, except in those cases where the class teacher had continued her work whilst in the early stages of the disease. Apart from this infection by teachers, there was no definite evidence that the schools were acting as centres for the dissemination of the disease, perhaps, because from the very beginning, special attention was paid to ventilation, and any child who appeared to be ill was at once sent home. A further complication arose when parents began to keep their children at home in large numbers for fear that they would contract the disease. A beginning with school closure was made on Oct. 11th, with the Infants' Departments of Balliol and Gray Street Council Schools and the Girls' Department of Gray Street Council School. Four days later, 4 other departments were closed and 6 days later, 3 more. On the 18th October, it was considered desirable, owing to the rapid increase in the number of cases, to close all the schools until the 11th November. The attendance of several departments at the time of closure was over 80 per cent., but this step, of complete closure, in which a few days later, the secondary schools were included, enabled us to take advantage of a clause in the regulations governing picturedromes to the

effect that children below the age of 7 years could be excluded from these places of entertainment when the schools were closed because of infectious disease. On representations being made to the licensees that the age of 7 years had been fixed with a view to preventing the spread of measles and whooping-cough, and that the age of 14 years should be substituted when dealing with an epidemic of influenza they readily consented to exclude from their premises all children apparently below the age of 14 years, and this continued throughout the period of school closure.

After the schools re-opened, the Head Teachers were asked to obtain particulars of the total number of children who had been ill in bed with influenza at any time during the epidemic. The result showed that the enormous number of 2,524 children or 19.5 per cent. of the number upon the school rolls, had been attacked.

When the schools re-opened, arrangements were made for thorough ventilation; general assemblies of the children were forbidden and under no circumstance was the number of children to exceed that for which a room had been certified. Any teacher or scholar showing signs of illness was sent home at once, and no one convalescent after influenza was allowed to return to school until all abnormal nasal discharge had ceased.

The daily records of attendance which had been sent since the early days of the epidemic were again requested, but it was found from the time of the re-opening that the attendance was practically normal.

Leaflets on the danger of the disease and how its spread could be minimised were largely distributed.

During the closure, an opportunity was taken to disinfect the schoolrooms and books, not only by fresh air, but also by chemical agencies.

The following table gives the schools from which cases and contacts of cases of infectious diseases were notified:—

School	Measles			Chickenpox			Whooping Cough			Mumps	Influenza
	Cases	Con-tacts	Total	Cases	Con-tacts	Total	Cases	Con-tacts	Total	Cases	Cases.
Salisbury Road	22	18	40	23	1	24	29	13	42	25	274
Hawthorne Rd.	19	14	33	—	—	—	—	3	3	8	203
Linacre	39	35	74	54	27	81	1	—	1	100	240
Bedford Road	6	10	16	5	1	6	7	2	9	2	107
Gray Street	27	29	56	6	2	8	15	12	27	3	396
St. James'	43	34	77	1	4	5	14	6	20	4	285
St. Mary's	23	11	34	6	1	7	—	2	2	2	136
Christ Church	25	13	38	3	—	3	6	2	8	6	134
St. John's	—	9	9	1	—	1	4	5	9	5	42
St. Winefride's	17	20	37	10	1	11	2	—	2	4	195
St. James' Select	5	2	7	1	—	1	—	—	—	—	96
Orrell	20	20	40	35	3	38	2	2	4	69	222
Balliol	25	6	31	3	—	3	10	2	12	4	194
St. Alexander's, L'pool	—	2	2	1	—	1	2	1	3	—	—
Various	5	5	10	1	—	1	5	—	5	12	—
Totals	276	228	504	150	40	190	97	50	147	244	2524
No. of visits & re visits	458			190			157			244	460

The total number of visits and re-visits to all cases of minor infectious diseases was 1,509, compared with 2,041 in 1917.

Following-up.—Re-examinations took place in every department; the number re-examined in school and at the School Medical Offices was 3,846.

Work of the School Nurses.—Miss Nicholls, who had been School Nurse since January, 1913, left on the 14th November, and her successor (Mrs. Hogan) could not commence duty until January 1st, 1919.

During the year the School Nurses paid 4,258 visits to the homes of school children.

It is becoming evident that a third School Nurse must be appointed if the work of following-up in the homes is to be satisfactorily accomplished, as practically the whole time of the School Nurses is occupied on work at or in connection with the Clinics, and in the periodical exam-

inations in schools for cleanliness. It is generally considered necessary to have one School Nurse for every three to four thousand children on a school roll: taking the larger number even, the additional School Nurse would be justified.

The assistant appointed to help the doctor when in the schools continues her work of weighing and measuring the children, making preliminary tests of the vision, and helping to dress and undress the children.

BOARD OF EDUCATION.—TABLE IV.

TABLE IV.—TREATMENT OF DEFECTS OF CHILDREN DURING 1918.

The total number of defects for which treatment was required was 7,843, the percentage cured or remedied being 28.2.

The following are the figures for past years :—

Year.	No. of Defects.	Percentage cured or remedied.
1917	8,707	29.0
1916	7,149	33.3
1915	5,169	33.4
1914	4,145	38.9
1913	4,038	32.7
1912	3,254	29.8

When a defect is "remedied" the following-up card is removed and the child may be lost sight of: the tendency now is to retain the cards for longer periods in order to ensure that the child will be seen at the next re-examination in the school, and as a consequence the percentage of defects described as "remedied" is falling.

In this table "new" defects include all those for which a new following-up card was written during the year.

The children with carious teeth are those discovered at the medical and not at the dental inspections.

Of the 2,698 defects which had been improved as the result of treatment, 588 relate to children who have since left school, as were 502 of the 2,413 which were unchanged though *some* treatment had been provided.

The 355 defects under the heading "No report" occurred in children who were absent at the time of re-examination, and the school nurses could not get into touch with them because of their change of addresses or other reasons.

Fifty-two children who live in Bootle and attend a Liverpool school were referred by the School Medical Officer of Liverpool and followed up by your School Nurses. Of the children who attend Bootle schools and reside outside the district, 44 were referred to the School Medical Officer of Liverpool, 7 to the School Medical Officer of Lancashire, and 2 to the School Medical Officer of Waterloo.

Minor Ailments Clinic.—The table gives particulars of the cases dealt with in 1918.

Defect.	No. of children.	No. of Attendances.	Transferred to X-ray Clinic.	Cured	Improved and still attending.
Ringworm of body	26	154	—	26	—
Ringworm of scalp	69	2,444	12	36	21
Impetigo of head	44	307	—	43	1
Impetigo of face	84	640	—	84	—
Eczema	31	197	—	30	1
Septic toe or finger	23	153	—	23	—
Otorrhoea	52	1,061	—	18	34
Conjunctivitis	11	89	—	10	1
Blepharitis	5	35	—	5	—
Various	76	511	—	72	4
Totals ...	421	5,591	12	347	62

During 1917, 448 children made 6,686 attendances.

Of the 76, who at the end of 1917 were "Improved and still attending," 59 made no attendance during 1918. The great majority of the cases had suffered from discharging ears, which had so improved that nothing further could be done.

Open Air Classes.—Playground classes are held during the summer months in most of the schools to the great advantage of the children concerned, but it is very desirable that even more attention should be paid to this matter, and definite schemes for regular open air instruction should be arranged. The Principal Medical Officer of the Board of Education in his last Annual Report states :—

"It cannot too strongly be urged upon Local Education Authorities (i) that they should seize and even create opportunities to institute or develop arrangements for providing education under open air conditions; (ii) that they should call for report from the School Medical Officer both as to the particular need in their areas for open air schools or classes and as to the closer study of the effect of the open air system upon different types of debilitated children; (iii) that they should consider the effectual ventilation, both means and maintenance, of their ordinary schools.

The result will inevitably be a great increase in the physical and mental vigour of the children—an experience which School Medical Officers and teachers in areas where provision already exists have during the past years invariably recorded. There are not less than 10 per cent. of the school children of England and Wales who would reap permanent advantage by being taught in open air schools."

Juvenile Employment.—The new Education Act of 1918 will prohibit any employment of children under twelve years of age; it restricts the hours of labour of children aged 12 to 14; it prohibits the street trading of children under 14 or their employment in factories, workshops or mines; and it empowers the Local Education Authority, acting upon a report of the School Medical Officer as to the health and physical development of an employed child, to modify or prohibit such employment.

Since August 8th, 1918, all Local Education Authorities have been empowered :—

- (I.) to investigate and obtain particulars of a child's employment from his parents or employer;
- (II.) to prohibit or restrict injurious employment or such as renders the child unfit to obtain proper benefit from his education; and
- (III.) to prosecute employers contravening the Act in this respect.

In the last report of the Medical Department of the Board of Education, it states :—

" In view of these new powers which are now in operation, every Local Education Authority should forthwith and without further delay exercise to the full its new powers.

" I suggest that in every educational area the Authority should forthwith require the School Medical Officer to undertake certain specified duties in regard to the premature or excessive employment of children :—

- (I.) to report periodically upon the employment of all children of school age and its effect on their health;

(II.) to examine annually all leavers as required by the Code, and in particular to report on their fitness for employment;

(III) to examine employed children forthwith, and subsequently from time to time as "specials" and certify the Authority if and when the employment is injurious or prejudicial to the health or physical development of the child, or renders him unfit to obtain proper benefit from his education (Education Act, 1918, section 15);

(IV.) to facilitate any necessary treatment of such children promptly;

(V) to co-operate with the certifying factory surgeon of the district in selecting children for factory work;

(VI.) to furnish (on application) the Welfare Supervisor of factories and workshops where the child is employed with the latest school medical report on the child's physique;

(VII.) to assist the Authority in carrying out the provisions of the Employment of Children Act, and to co-operate closely and continuously with the Juvenile Employment Committee (or with the Labour Exchanges)."

It is hoped that with the return of Dr. Taylor, the greater part of the arrangements suggested above, may be carried out. In areas where there is close co-operation with the Certifying Factory Surgeon and the School Medical Officer, a considerable amount of pressure can be brought to bear upon the parents of children who leave school with untreated defects. Reference may be made to a comprehensive report by Dr. Milligan, in my annual report of 1913, on the employment of school children.

Feeding of School Children.—During the winter 1917-18, the limited number of children for whom meals were required were given coupons for presentation at approved eating-houses. Though the food was satisfactory, there was no attempt at all to give the meals an educational

character, and I cannot recommend a renewal of these arrangements. During the winter 1918-19, the number of children was again small, and arrangements were made for the food to be supplied from the National Kitchen which was then in operation. The children partook of the meals at the schools, and except for transport difficulties which interfered at times with the punctual delivery of the meals, the system was similar to that adopted in winters prior to that of 1917-18. After the National Kitchen closed on December 28th, the meals were again prepared at the Canteen Committee's Kitchen in Marsh Lane, and distributed to the schools from there.

The dietary is the same as in recent years ; porridge is given on two mornings a week, soup and bread on one morning, and cocoa and bread on the other two. No meals are given on Saturdays and Sundays, nor during the summer months.

School Premises.—Several complaints were received as to the lack of warmth in the Bedford Road School. I trust before the winter of 1919, arrangements will be made for the heating system to be reconstructed.

A new school is about to be erected in Orrell : I would suggest that an open-air annexe be provided, in which delicate children could receive a modified form of education without detriment to their health, and that a special room be provided, at least 20 feet long, in which the medical inspections can take place, and which could also be used each morning for the treatment of minor ailments in children attending that and neighbouring schools, as it is too far for children residing in the north-easterly portions of the town to attend the School Medical Offices each morning for treatment, and return to their schools in time to have their attendance recorded there.

Deaths.—The deaths of 109 children of school age occurred during the year : included are 9 the result of phthisis, 6 tuberculous meningitis, 6 other forms of tuberculosis, 33 influenza, 19 pneumonia, 5 organic heart disease, 7 scarlet fever, 8 diphtheria, 1 nephritis, and 3 accidents.

TABLE III.—NUMERICAL RETURN OF ALL EXCEPTIONAL CHILDREN IN THE AREA IN 1918.

					Boys.	Girls.	Total.
Blind. (including partially blind).		Attending Public Schools ...	Elementary	...	7	15	22
		Attending Certified Schools for the Blind	...	...	5	5	10
		Not at School	...	...	3	—	3
Deaf and Dumb (including partially deaf).		Attending Public Schools ...	Elementary	...	—	2	2
		Attending Certified Schools for the Deaf	...	...	4	3	7
		Not at School	...	...	—	1	1
Mentally Deficient	Feeble Minded.	Attending Public Schools ...	Elementary	...	7	6	13
		Attending Certified Schools for Mentally Defective Children	...	...	—	—	—
		Notified to the Local (Control) Authority during the year	...	...	—	—	—
Epileptics.		Not at School	...	...	3	4	7
		At School	...	...	—	—	—
		Not at School	...	...	5	3	8
Physically Defective.	Idiots.	Not at School	...	...	6	2	8
		Attending Public Schools ...	Elementary	...	3	5	8
		Attending Certified Schools for Epileptics	...	...	—	—	—
Pulmonary Tuberculosis.		Not at School	...	...	4	5	9
		Attending Public Schools ...	Elementary	...	34	36	70
		Attending Certified Schools for Physically Defective Children	...	...	—	—	—
Other forms of Tuberculosis.		Not at School	...	...	16	23	39
		Attending Public Schools ...	Elementary	...	40	28	68
		Attending Certified Schools for Physically Defective Children	...	...	2	4	6
Cripples other than Tubercular		Not at School	...	...	15	18	33
		Attending Public Schools ...	Elementary	...	18	11	29
		Attending Certified Schools for Physically Defective Children	...	...	—	—	—
*Dull or backward		Not at School	...	...	5	5	10
		Retarded 2 years	...	...	153	36	189
		Retarded 3 years	...	...	149	29	178
		Retarded 4 years and over	...	...	4	4	8

* Judged according to age and standard.

